

Unit 1 What is Money?

1/21/15

1.1 Money Defined

What is money?

happiness, paper to get you through life,
form of payment, motivation, trade money
to get stuff, currency, riches, luxury,
something only some people have

Avarice is the root of all evil.

1.1 p.1 video

1.1 Money Defined

1/21/15

Key Terms:

bartering

commodity money

currency

digital money

fiat money

medium of exchange

money

storehouse of value

unit of account

1.1 Money Defined

1/21/15

IWBAT

- Explain what money is
- Describe the different forms it can take.

I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

1.1 Money Defined

1/21/15

Economy - the sum of all of the goods and services of a region

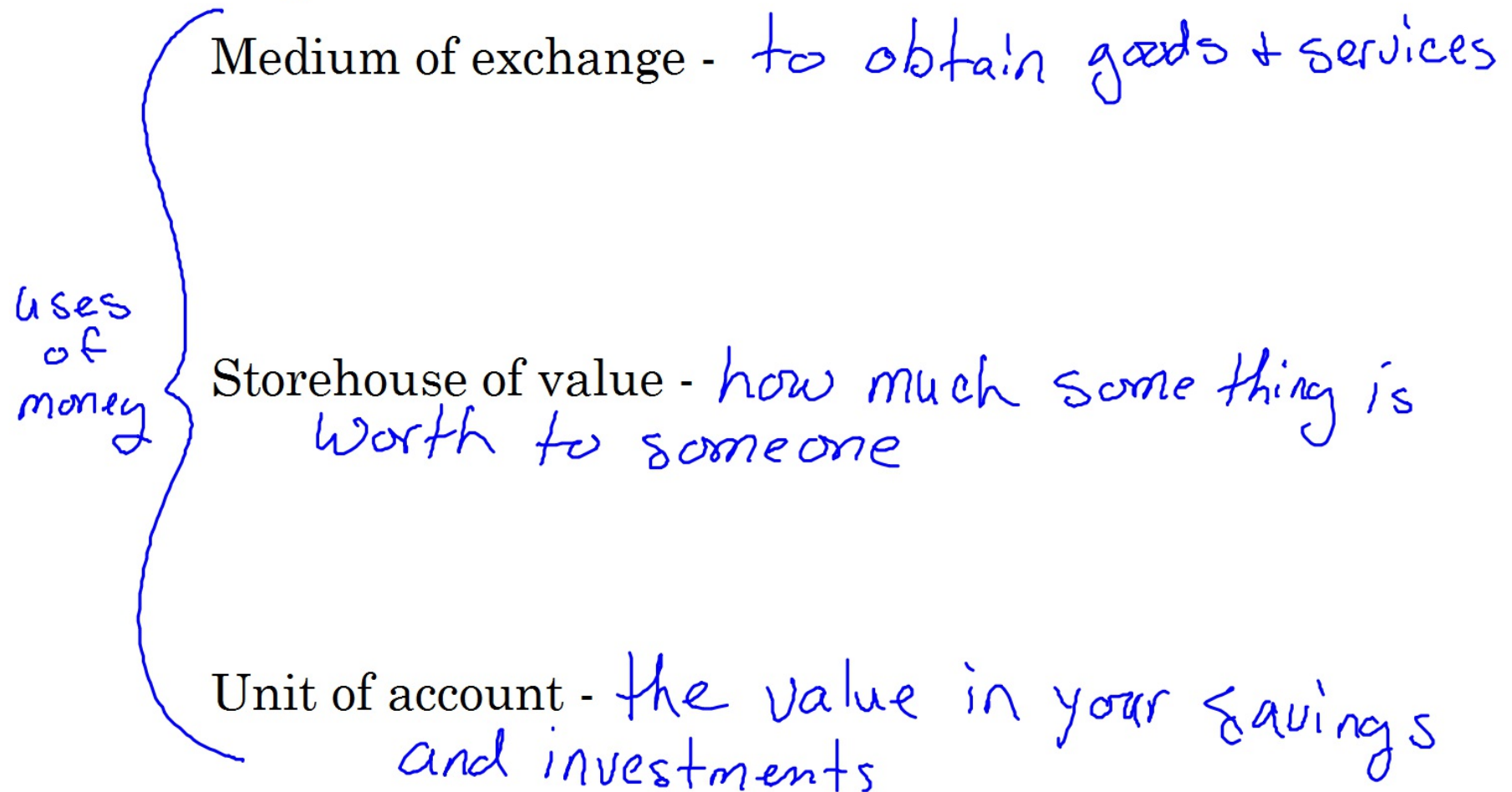
Money - anything that is traded for goods or services

Bartering - trading goods and services for other goods and services

IWBAT explain what money is and describe the different forms it can take.

1.1 Money Defined

1/21/15



IWBAT explain what money is and describe the different forms it can take.

1.1 Money Defined

1/21/15

Commodity money - is backed by physical items that have value - gold, silver, diamonds,...

US Dollar post-Civil War to 1971

Fiat money - is backed by the faith people have in it

US Dollar after 1971

IWBAT explain what money is and describe the different forms it can take.

1.1 Money Defined

1/21/15

Digital money - exists only in a computer -
cannot felt, seen, smelled, ...

Currency - cash - bills + coins
Physical money
\$

IWBAT explain what money is and describe the different forms it can take.

1.1 Money Defined

1/21/15

Vocabulary: Appendix A.3 Key Terms

Practice: 1.1.2 #2-9

IWBAT explain what money is and describe the different forms it can take.

1.2 How Money is Created

1/22/15

What are the three uses of money and how do they differ?

medium of exchange - give money to get goods or services

storehouse of value - how much something is worth

unit of account - value of savings & investments

1.2 How Money is Created

1/22/15

Let's review yesterday's Practice Problems.

3) Commodity - backed by actual materials (usu. Ag, Au)

Fiat - backed by people's faith in the value
since 1971

$$\begin{array}{r} 5) \quad 2 \times 50 = 100 \\ \quad 3 \times 20 = 60 \\ \quad 13 \times 5 = 65 \\ \hline \quad \quad \$224.00 \\ \quad - 223.80 \\ \hline \quad \quad \$1.20 \end{array}$$

$$\begin{array}{r} 9 \times 1 \times 50 \quad ,450 \\ 8 \times 5 \times 40 \quad 1600 \\ 2 \times 10 \times 50 \quad 1000 \\ 7 \times 25 \times 40 \quad 7000 \\ \hline \quad \quad \$100.50 \end{array}$$

$$\begin{array}{r} 6) \quad 36 \times 1 = 136 \\ \quad 68 \times 5 = 340 \\ \quad 51 \times 10 = 510 \\ \quad 37 \times 25 = 925 \\ \quad 5 \times 50 = 250 \\ \hline \quad \quad \$20.61 \end{array}$$

1.2 How Money is Created

1/22/15

IWBAT

- Learn how money is created.
- Understand the role of Treasury bonds and the Federal Reserve.
- Understand the concept of fractional-reserve banking.

I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

1.2 How Money is Created

1/22/15

bank — a place where you store money securely
can exchange different denominations
Loan money

securities — investments

Federal Reserve Bank — national bank for the USA
Where Congress goes for its spending money.

Tax money

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/22/15

Federal Reserve Bank

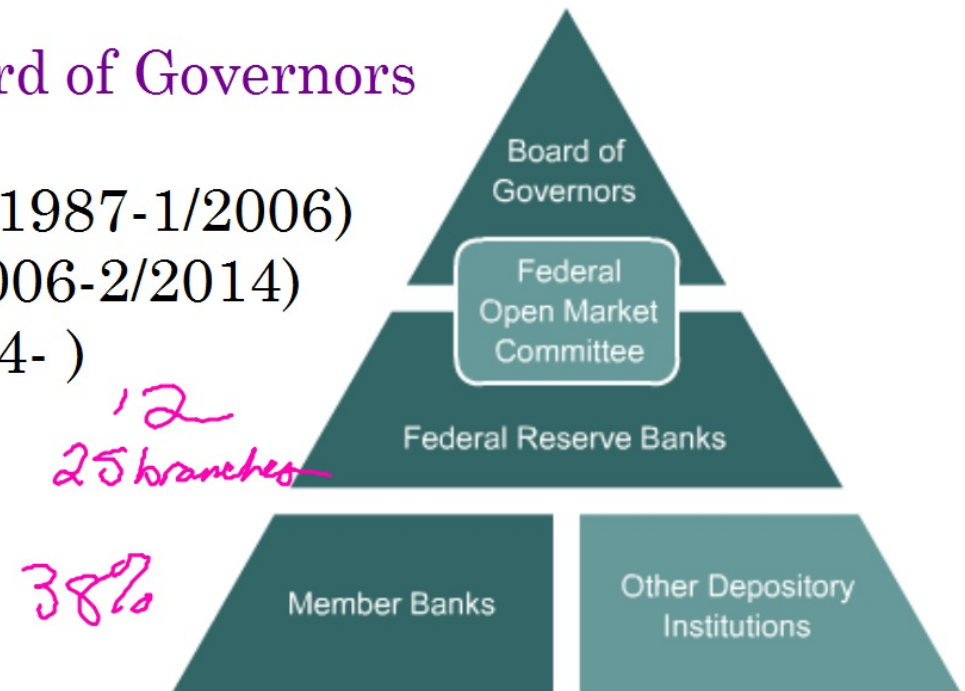
Chairman of the Board of Governors

Last three:

Alan Greenspan (8/1987-1/2006)

Ben Bernanke (2/2006-2/2014)

Janet Yellen (2/2014-)



IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/22/15

Why don't they just print more money?

According to the Federal Reserve, a few of the many benefits of a sound monetary policy are:

- It promotes stable economic growth.
- It ensures that employment levels are not too low.
- It helps keep prices stable.

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/22/15

The three main tools that the Federal Reserve uses to enact monetary policy are:

- **open market regulation** — The purchase and sale of U.S. Treasury and federal-agency securities such as Treasury bonds.
- **discount rate** — The interest rate charged to commercial banks on loans they receive from the Federal Reserve.
- **reserve rate** — The amount of funds that a bank must hold in reserve. The rate is given as a percentage of the total deposits.

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/23/15

bond - a promise by an institution to pay an investor the full amount borrowed plus periodic interest

US Treasury bond -

- 1) gov't asks US Treasury for money
- 2) UST issues bonds
- 3) UST sells bonds to banks often foreign
- 4) UST gives money to gov't
- 5) populace pays UST via taxes

Apex 1.2.1 p. 8

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/23/15

How does the Fed buying & selling bonds affect you?

Buy from a bank, gives the bank money, the bank loans out the money, interest rate decreases

Apex 1.2.1 p. 9

Sell to the bank, bank has less money available, bank cannot loan as much, interest rates increase

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

Fractional Reserve Banking

reserve rate

1/23/15

| Liability Type | Requirement | |
|--|------------------|----------------|
| | % of liabilities | Effective date |
| Net transaction accounts ¹ | | |
| \$0 to \$14.5 million ² | 0 | 1-22-15 |
| More than \$14.5 million to \$103.6 million ³ | 3 | 1-22-15 |
| More than \$103.6 million | 10 | 1-22-15 |
| Nonpersonal time deposits | 0 | 12-27-90 |
| Eurocurrency liabilities | 0 | 12-27-90 |

<http://www.federalreserve.gov/monetarypolicy/reservereq.htm>

Nonpersonal time deposit - A deposit account that is held by a depositor such as corporations, foreign banks, and bank corporate customers other than individuals; an example is a money market. This account pays a fixed amount for a period of time and it requires advance notice before money can be withdrawn from it. Advance notice has to be issued in order not to incur an early withdrawal penalty. (investorwords.com)

eurocurrency liabilities

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/23/15

Assume the reserve rate is 10%, that a bank receives a deposit of \$650, and that all transactions take place at the same bank. How much of that original \$650 can a bank loan out?

5 loans

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/23/15

Assume the reserve rate is 10%, that a bank receives a deposit of \$1200, and that all transactions take place at the same bank. How much of that original \$1200 can a bank loan out?

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.2 How Money is Created

1/23/15

Vocabulary: Appendix A.3 Key Terms

Quiz: Apex 1.2.3

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.3 Inflation & Recession

1/26/15

Why doesn't the Federal Reserve Bank just print more money?

1.3 Inflation & Recession

1/26/15

Assume the reserve rate is 10%, that a bank receives a deposit of \$650, and that all transactions take place at the same bank. How much of that original \$650 can a bank loan out? *5 loans*

| | |
|-----------|----------|
| \$650 | \$65 |
| 585 | 58.50 |
| 526.50 | 52.65 |
| 473.85 | 47.38 |
| 426.47 | 42.65 |
| + 383.82 | |
| <hr/> | <hr/> |
| \$3045.64 | \$266.18 |
| Digital | Currency |

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.3 Inflation & Recession

1/26/15

Assume the reserve rate is 10%, that a bank receives a deposit of \$1200, and that all transactions take place at the same bank. How much of that original \$1200 can a bank loan out?

5 loans

| | | |
|-----------|---|----------|
| \$1200 | - | \$120 |
| 1080 | = | 108 |
| 972 | = | 97.20 |
| 874.80 | | 87.48 |
| 787.32 | | 78.73 |
| + 708.59 | | |
| <hr/> | | |
| \$5622.71 | | \$491.41 |
| Digital | | Currency |

IWBAT learn how money is created, understand the role of Treasury bonds and the Federal Reserve, and understand the concept of fractional-reserve banking.

1.3 Inflation & Recession

1/26/15

Define inflation, deflation, and recession

inflation – prices get bigger (increase)
1%-3% healthy dollars do not buy as much

deflation – prices decrease
dollars buy more

recession – prolonged deflation
(months)

IWBAT

- discuss inflation, deflation, and recession.

I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

1.3 Inflation & Recession

1/23/15

Purchasing power - *the ability to use money to make purchases*

Inflation - *purchasing power decreases*
wages increase, prices increase, profits increase

Deflation - *purchasing power increases*
prices decrease, wages decrease, profits decrease,
layoffs, businesses close

IWBAT discuss inflation, deflation, and recession.

1.3 Inflation & Recession

1/26/15

Federal Reserve Bank - stores tax money, loans money to banks & gov't, borrows money from banks, controls interest rates

Consumer Price Index (CPI) - compares the cost of living in each city to the average for the nation

Fluctuation -



IWBAT discuss inflation, deflation, and recession.

1.3 Inflation & Recession

1/26/15

Recession - deflation over a long period (months)
prices go down, people lose jobs,
houses foreclosure
Great Recession unemployment ~10%

Depression - like a recession (worse) lasts years
Great Depression unemployment ~40%

IWBAT discuss inflation, deflation, and recession.

Recent US Recessions:

- July 1981 – November 1982: 14 months
- July 1990 – March 1991: 8 months
- March 2001 – November 2001: 8 months
- December 2007 – June 2009: 19 months

IWBAT discuss inflation, deflation, and recession.

1.3 Inflation & Recession

1/26/15

Vocabulary: Appendix A.3 Key Terms
Practice: 1.3.2

IWBAT discuss inflation, deflation, and recession.

1.4 National and Global Debt

1/28/15

In your own words, explain who would benefit from inflation and who would benefit from deflation.

inflation — factories/mfr., banks — loans,
gov't via increased taxes, retailers,
thrift stores/dollar stores

deflation — savers, drivers, pawn shop

1.4 National and Global Debt

1/28/15

Scientific Notation

Sixteen point one trillion dollars

\$16 100 000 000 000.
 $\$1.61 \times 10^{13}$

\$294,443 million
 $\$2.94443 \times 10^{11}$

IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

IWBAT

- discuss debt, deficit, GDP, debt ratio,
- use scientific notation to represent large numbers.

I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

1.4 National and Global Debt

1/28/15

Debt vs. Deficit

debt- what you owe

deficit- spending more than you earn

Public Debt & Intragovernmental Debt

public debt is owed to the populace (you)

Intragovernmental debt includes items like Medicaid, Social Security, and monies borrowed from one department to pay another department.

IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

1.4 National and Global Debt

1/28/15

Liabilities and Assets

Liabilities - what you owe to someone
(mortgage, student loans, credit card balance)

Assets - are what you own that
have value to someone and can be
sold to cover a debt
(jewelry, antiques, car, house)

IWBAT discuss debt, deficit, GDP, debt ratio, and
use scientific notation to represent large numbers.

1.4 National and Global Debt

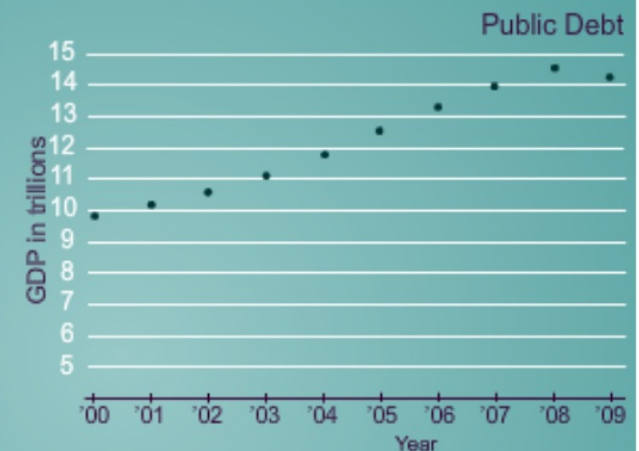
1/28/15

Gross Domestic Product (GDP)

| Category | Description |
|---------------------|---|
| Consumer Purchase | All goods and services purchased, such as gasoline |
| Investment | Business and residential investments, such as machinery or houses |
| Government Spending | All spending on education, defense, employee salaries, etc. |
| Net Exports | Exports sold minus imports purchased |

Here is the approximate GDP for the United States from 2000 to 2009.

| Year | GDP |
|------|--------------------|
| 2000 | 9,951,500,000,000 |
| 2001 | 10,286,100,000,000 |
| 2002 | 10,642,300,000,000 |
| 2003 | 11,142,100,000,000 |
| 2004 | 11,867,800,000,000 |
| 2005 | 12,638,400,000,000 |
| 2006 | 13,398,900,000,000 |
| 2007 | 14,077,600,000,000 |
| 2008 | 14,441,400,000,000 |
| 2009 | 14,240,200,000,000 |



IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

1.4 National and Global Debt

1/28/15

| Debt to GDP ratio | | | |
|----------------------------------|---------------------------|---------------------------|---------------------------|
| $\frac{\text{debt}}{\text{GDP}}$ | 2008 | 2009 | 2007 |
| | $\frac{\$14.6t}{\$14.4t}$ | $\frac{\$14.1t}{\$14.2t}$ | $\frac{\$14.0t}{\$14.1t}$ |
| | = 103.9% | = 99.3% | = 99.3% |

This is done to make comparisons between countries' spending easier by putting small economies on the same scale as large economies.

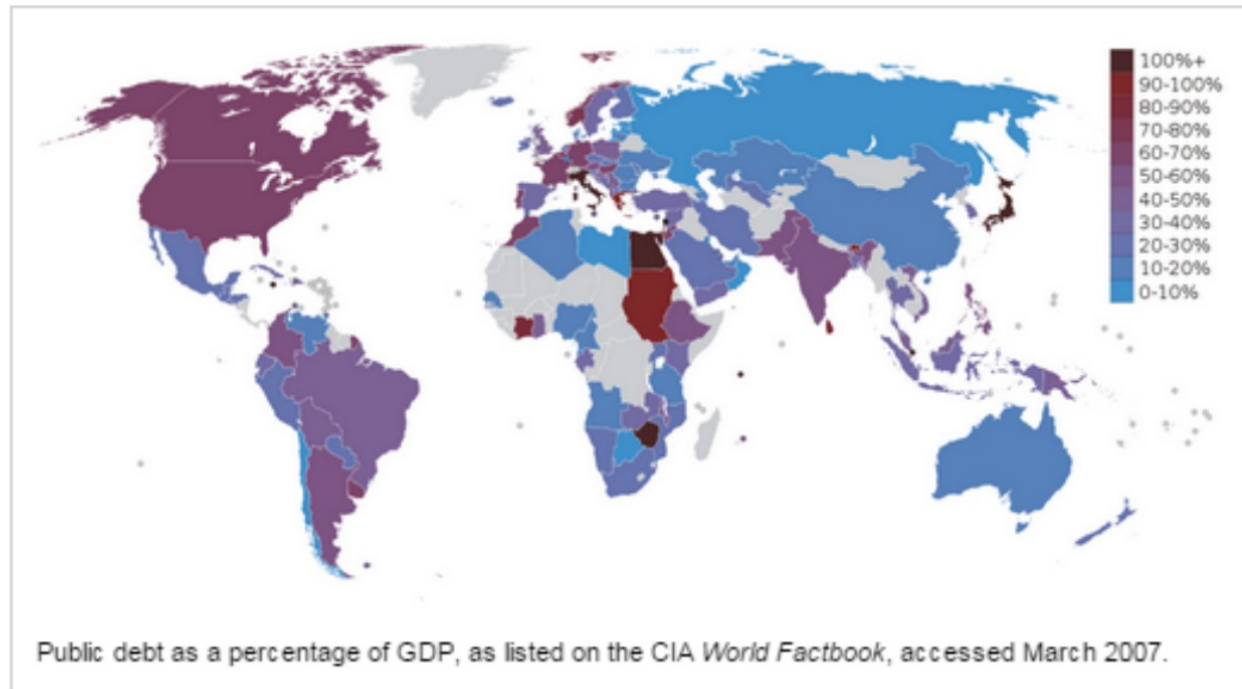
Apex 1.4.1 p.7

IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

1.4 National and Global Debt

Global Debt

1/28/15



<https://www.cia.gov/library/publications/the-world-factbook/>

Who holds our debt?

IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

Vocabulary: Appendix A.3 Key Terms
Practice: 1.4.2

If a country's debt-to-GDP ratio is currently 50% and its debt is expected to grow from \$10 trillion to \$15 trillion in the next 20 years, what will the country's GDP have to be in 20 years to maintain the current debt-to-GDP ratio?

IWBAT discuss debt, deficit, GDP, debt ratio, and use scientific notation to represent large numbers.

Three trillion
two-hundred billion 3200,000,000,000 3.2×10^{12} 1/29/15

Five billion
Three-hundred million 5300000000 5.3×10^9

Eight million
Nine-hundred thousand 89 $\times 10^6$

| | |
|----------|--------------------|
| trillion | 1×10^{12} |
| billion | 1×10^9 |
| million | 1×10^6 |
| thousand | 1×10^3 |
| hundred | 1×10^2 |
| ten | 1×10^1 |

GDP

debt

1/29/15

$\frac{\text{debt}}{\text{GDP}}$

$$\frac{32,520,000,000}{15,300,650,000}$$

$$\frac{3.252 \times 10^{10}}{1.53 \times 10^{10}} = 212\%$$

$$\frac{X}{80,000,000,000} = 80\%$$

0.8

$$8.0 \times 10^{11}$$

$$8.0 \times 10^{-1}$$

$$64 \times 10^{10}$$

$$6.4 \times 10^{11}$$

1/29/15

$$\frac{2012 \text{ debt}}{\text{GDP}} > \frac{2013 \text{ debt}}{\text{GDP}}$$

$$\frac{12}{20} > \frac{12}{\boxed{25}}$$

$$\frac{12}{20} > \frac{10}{25}$$

$$\frac{12}{20} > \frac{13}{25}$$

1.5 Other Forms of Currency

1/29/15

If a country's debt-to-GDP ratio is currently 50% and its debt is expected to grow from \$10 trillion to \$15 trillion in the next 20 years, what will the country's GDP have to be in 20 years to maintain the current debt-to-GDP ratio?

$$\cancel{x} \cdot \frac{\$15t}{\cancel{x}} = 50\% \cdot x$$

$$\frac{\$15t}{50\%} = \frac{50\% \cdot x}{50\%}$$

$$\frac{\$15t}{.5} = x$$

$$\$30t = x$$

1.5 Other Forms of Currency

1/29/15

APK: Name other currencies known to you and the countries in which they are used.

Pesos Mexico

Dollars US

Euros EU

Pounds GB

IWBAT

- Explore the relationship between two currencies.

Learn how to use exchange rates to change from one currency to another.

I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

1.5 Other Forms of Currency

1/29/15

According to the CIA World Factbook, as of 2007 there were roughly 182 different currencies, making up a grand total of \$12.35 trillion.

| | | |
|----------------|-----|-----|
| United States | \$1 | USD |
| Canada | \$1 | CAN |
| Great Britain | £1 | GBP |
| European Union | €1 | EUR |
| New Zealand | \$1 | NZD |
| Australia | \$1 | AUS |
| Switzerland | 1SF | CHF |
| Japan yen | 1¥ | JPN |
| China yuan | 1¥ | CHN |
| Mexico | \$1 | MXN |

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

1/29/15

What is Bitcoin?

■ Jigsaw 1-4

#1 p.1

#2 p.2 until p.3 "What are its characteristics?"

#3 p.3 "What are its characteristics?"
& characteristics 1-3

#4 p. 4 characteristic 4-end

- You will read and discuss your section with your group.
- You will then nominate a spokesperson for your group to present what you have learned to the class.

1.5 Other Forms of Currency

1/30/15

If a country's debt-to-GDP ratio is currently 30% and its debt is expected to grow from \$8 trillion to \$19 trillion in the next 20 years, what will the country's GDP have to be in 20 years to maintain the current debt-to-GDP ratio?

$$\begin{aligned} & \cancel{X} \frac{\$19t}{\cancel{X}} = 30\% \cdot X \\ & \frac{19t}{30\%} \quad \frac{30\% \cdot X}{30\%} \\ & \frac{\$19t}{.3} = X \\ & \$63.3t = X \end{aligned}$$

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency Exchange Rate

1/30/15

If \$1 = 6.25 ¥, then \$250 = 1562.5 ¥.

If 0.89 EUR = 1USD, then 250USD = 222.5 EUR.

If MX\$1 = \$0.07, then MX\$250 = \$17.50.

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

Currency Quote

1/30/15

€100
\$140.20



\$140.26
€100

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

Exchange Rate Board

1/30/15

1 Baht (Thailand)

$\$1 \Rightarrow \text{b } 35.03$

$\text{b } 36.10 \Rightarrow \1

| Currency | | Buying | Selling |
|-------------|-----|--------|---------|
| | | Notes | Notes |
| USA | USD | 35.03 | 36.10 |
| EURO | EUR | 45.72 | 46.86 |
| ENGLAND | GBP | 68.96 | 70.90 |
| JAPAN | JPY | 0.2879 | 0.2971 |
| SINGAPORE | SGD | 22.89 | 23.59 |
| HONG KONG | HKD | 4.47 | 4.66 |
| AUSTRALIA | AUD | 27.08 | 27.97 |
| NEW ZEALAND | NZD | 24.18 | 25.31 |

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

1/30/15

Foreign Exchange market (forex)

... a global decentralized market for the trading of currencies. In terms of volume of trading, it is by far the largest market in the world. The main participants in this market are the larger international banks.

(http://en.wikipedia.org/wiki/Foreign_exchange_market)

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

1/30/15

"... unpleasant surprise"

■ Jigsaw 1-4

#1 p.1 through "... Venezuelan bolivar."

#2 p.1 "There are three levels ..." until p.2
"... won't be revealed."

#3 p.2 "Currencies are in essence ..." to end

- You will read and discuss your section with your group.
- You will then nominate a spokesperson for your group to present what you have learned to the class.

IWBAT explore the relationship between two currencies.

1.5 Other Forms of Currency

1/30/15

Vocabulary: Appendix A.3 Key Terms

Practice: 1.5.2

1. If $1 \text{ GBP} = 1.5628 \text{ USD}$, then how many USD can you exchange for 550 GBP?

2. If $1 \text{ GBP} = 1.5628 \text{ USD}$, then how many GBP can you exchange for 300 USD?

HW: Write a one paragraph summary of "...unpleasant surprise" to be turned in Monday.

IWBAT explore the relationship between two currencies.

1.6 What is Money? wrap-up

2/02/15

Calculate the exchange values for two currencies.

1. If 1 GBP = 1.5628 USD, then how many USD can you exchange for 550 GBP?

$$\begin{array}{r} 550 \\ \text{GBP} \end{array} \times \begin{array}{r} 1.5628 \\ \text{USD} \\ \hline \text{GBP} \end{array} = \begin{array}{r} 859.54 \\ \text{USD} \end{array}$$

2. If 1 GBP = 1.5628 USD, then how many GBP can you exchange for 300 USD?

$$\begin{array}{r} 300 \text{ USD} \\ \hline 1.5628 \text{ USD} \\ \hline \text{GBP} \end{array} = \begin{array}{r} 191.96 \\ \text{GBP} \end{array}$$

1.6 What is Money? wrap-up

2/02/15

**Turn in your summary paragraph for
"... unpleasant surprise".**

1.6 What is Money? wrap-up

2/02/15

1.6.2 Practice problems

#1-8, 10, 12, 13, 15-20

#9

$$\text{Money multiplier} = \frac{1}{r}$$

#11

$$\$30000 * \frac{1}{7\%} = \$428571.42$$

$$\$30000 * \frac{1}{5\%} = \$600000$$

$$\$600000 - 428571.42 = \$171428.58 \text{ more}$$

#14

stagnation - a prolonged period of little or no growth in the economy.

Answer the following with complete sentences.

- 1) What are the three uses of money?
- 2) How do the three uses of money differ from each other?
- 3) How does commodity money differ from fiat money?
- 4) Please give three examples of currency.
- 5) How does the economy change with inflation?
- 6) How does the economy change with deflation?
- 7) How does a recession differ from a depression? Which did we most recently experience?
- 8) Express twenty-eight point seven million in scientific notation.
- 9) Is a liability always bad? Explain.
- 10) How do debt and deficit differ?

Answer the following with complete sentences.

- 11) What is an exchange rate?
- 12) How does one use an exchange rate board?
- 13) How does the federal government acquire money when the US Treasury has none to give?
- 14) What is a Treasury bond?
- 15) What happens when a Treasury bond is sold to a bank?
- 16) What happens when a Treasury bond is bought from a bank?
- 17) Why is the debt-to-GDP ratio used?
- 18) What is counted in the GDP?
- 19) What does the CPI compare?
- 20) How does a change in the reserve rate affect fractional-reserve-banking?